BY ORDER OF THE COMMANDER
18TH WING (PACAF)

18TH WING INSTRUCTION 21-131

19 JUNE 2000

Maintenance

IMPOUNDMENT PROCEDURES

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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Pages: 6

Distribution: F

This instruction implements AFPD 21-1, *Managing Aerospace Equipment Maintenance*. It supplements PACAFI 21-101, *Objective Wing Aircraft Maintenance,* and provides local guidance for impoundment of aircraft, engines, and/or equipment. It applies to 18th Wing and associate units at Kadena AB. This publication does not apply to the Air National Guard or US Air Force Reserve.

1. Aircraft/Engine Impoundment Criteria. All aircraft assigned to the 18th Wing (18 WG) will be immediately impounded by 18 OG Quality Assurance (18 OG/QA) when involved in any of the following incidents:

1.1. In-flight occurrence of the following: shutdown of engines, flameout, stall/stagnation, auto acceleration, or activation of fire or overheat warning systems (i.e., lights).

1.2. Flight control anomalies exhibited by either a lack of response to a controlled input, uncommanded input resulting in a major change from the intended attitude or flight path, or any departure identified as “not pilot induced.”

1.3. Landing gear malfunctions resulting in a failure to retract or extend.

1.4. Uncommanded nose wheel steering inputs or system failure. **NOTE:** System failures will be evaluated on a case by case basis by QA for impoundment consideration.

1.5. (F-15 only). Double generator or emergency generator failure in flight.

1.6. Lost tools, items, or equipment on or in close proximity of an aircraft or uninstalled engine.

1.7. When any unscheduled fuel feed, transfer, or inability to transfer fuel occurs, which could cause an unsafe flight condition.

1.8. Foreign object damage (FOD) resulting from metal or an unknown material. Other incidents will be considered for impoundment by the 18 WG FOD Manager.

1.9. Any time a tire is blown other than normal wear (except HH-60).

1.10. Aircraft or engine fire.

1.11. (F-15 & HH-60). Uncommanded weapons release.

1.12. (F-15). Inadvertent gun firing or gun jam during firing. Impoundment is not required if a jam occurs during loading or unloading operation. All applicable safety practices must be followed in these cases.

1.13. Any incident reportable as directed by AFI 91-204, *Investigating and Reporting Mishaps* as reportable.

1.14. Any third time repeat.

1.15. Squadron commander/squadron maintenance officer (SMO) can request an aircraft be impounded.

1.16. Any uninstalled engine experiencing one of the following incidents:

1.16.1. Fire.

1.16.2. Augmenter burn through.

1.16.3. Turbine or compressor damage due to failure of any engine component.

1.16.4. Gearbox failure.

1.17. Dual engine rollback (HH-60).

2. Consider for impoundment:

2.1. Any repeat or recurring discrepancy.

2.2. Any dropped object (DO) incidents determined by investigation official to be serious enough to warrant impoundment.

2.3. Any Aerospace Ground Equipment (AGE) suspected of causing or being involved in mishaps with aircraft, associated equipment, or facilities will be impounded.

2.4. Any fuels related piece of equipment (R-11, R-12, R-14 etc.) suspected of causing or being involved in mishaps with aircraft, associated equipment or facilities will be impounded.

3. Aircraft Impoundment Responsibilities and Procedures.

3.1. SMO, sortie generation flight superintendent, or production supervisor will notify Maintenance Operations Center (MOC) when an aircraft has a condition that meets any of the impoundment criteria in this WGI. Pilot reported discrepancies that require impoundment if notification was not already made through declaration of an in-flight or ground emergency will be reported to MOC by the production supervisor/debriefer.

3.2. MOC will notify:

3.2.1. The 18 OG/QA and/or 18th Maintenance Squadron (MXS) supervision.

3.2.2. The 18 WG FOD/DOP Manager, as applicable, will:

3.2.2.1. Advise the flying squadron on specific parking instructions as required.

3.2.2.2. Remind the squadron that no maintenance will be performed other than installation of required safety devices, until the Impoundment Investigating Officials (IIO) is assigned and aircraft has been released by 18 OG/QA to the IIO. At that point, only actions coordinated and approved by the IIO will be allowed on the aircraft/equipment until the impoundment is released.

3.3. The 18 WG Safety will:

3.3.1. Determine if an incident requires a safety investigation upon notification by 18 OG/QA.

3.3.2. Request the IIOs information (name, rank, organization, and phone number).

3.3.3. Prepare a plan of action in writing and coordinate with the IIO on all activities. (i.e., checks to be accomplished, samples to be taken, or when to notify safety).

3.3.4. Sign off on the AFTO Form 781A, **Maintenance Discrepancy and Work Document**, "Safety Investigation" block after completing the safety investigation.

3.4. Affected SMO will:

3.4.1. Assign a qualified IIO, who meets the following criteria:

3.4.1.1. Must be a SNCO or Officer with at least 6 months experience on the current mission design series (MDS).

3.4.1.2. Must be assigned by letter, endorsed by applicable group commander, and have attended local "IIO" orientation briefing presented by 18 OG/QA.

3.4.1.3. Will not perform duties while assigned as the IIO that will detract from concentrating on the impoundment investigation.

3.4.2. Ensure no actions are taken on the aircraft (unless dictated by emergency conditions) which would affect the integrity of an investigation. No maintenance will be performed until aircraft is released to the IIO by 18 OG/QA. All actions after that point will be coordinated and approved by the IIO.

3.4.3. Ensure aircraft be segregated and identified as impounded. The preferred method is for aircraft to be parked in a separate hangar, hardened aircraft shelter, etc, with a rope perimeter established. Signs which read "IMPOUNDED AIRCRAFT DO NOT ENTER" will be placed at the nose and tail of the aircraft. At minimum, high visibility cones will be placed around aircraft, one cone at the nose, tail, and at each wing tip. Every effort will be made to limit access to the aircraft/equipment during the period of impoundment. Only those individuals assigned to the impoundment team or authorized by the IIO will be allowed access to the aircraft/equipment.

3.5. IIO will:

3.5.1. Contact 18 OG/QA, and/or 18 LG Quality Assurance (18 LG/QA), and inform them that the aircraft/engine/equipment has been released for investigation.

3.5.2. Clarify the write-up with the pilot/debriefer as needed.

3.5.3. Obtain a 90-day Core Automated Maintenance System (CAMS) maintenance history on the applicable work unit code and review discrepancies.

3.5.4. Ensure appropriate individuals are selected for impoundment team.

3.5.5. Appoint a qualified 7-level in the affected system to serve as the team chief during the investigation.

3.5.6. Control and direct all maintenance actions performed on the impounded aircraft. Coordinate maintenance support with 18 MXS, or other outside agencies.

3.5.7. Set the impoundment team work hours. **NOTE:** When the aircraft is in flight control dock, the IIO and the flight control diagnostic team manager will work together in establishing work hours.

3.5.8. Maintain an accurate record of all findings and corrective actions, including in-shop work, to determine the cause and ensure adequacy of corrective actions. Discrepancies which cannot be duplicated will be reviewed by the applicable SMO/OIC to ensure in-depth troubleshooting was accomplished.

3.5.9. Attach a red bordered AFTO Form 350, **Repairable Item Processing Tag**, with block 14 annotated, "Impounded Aircraft," to all removed components associated with the impoundment discrepancy.

3.5.10. Ensure the product deficiency corrective action block identifies all parts being held for possible Product Quality Deficiency Report (PQDR) action. **NOTE:** On aircraft involved in mishap investigations, 18 OG/QA, in coordination with the Flight Safety Investigating Officer, will determine which parts will be submitted for a PQDR. All parts removed during a mishap investigation will be held by the squadron support section until the PQDR determination has been made. In addition, the Flight Safety Investigating Officer will be the cognizant official on all PQDRs submitted for flight mishap investigations.

3.5.11. If the aircraft impoundment is transferred to an engine, the aircraft IIO will notify 18 WG Safety, MOC, 18 MXS maintenance supervision, and 18 MXS Propulsion Flight OIC/NCOIC of the impoundment transfer. If the squadron has repair capabilities, the impound will remain in the squadron. If the engine is beyond flight line repair capabilities the 18 MXS Propulsion Flight OIC/NCOIC will assign an IIO for the effected engine.

3.5.12. In the event an aircraft is impounded while in the Hush House, the Hush House will also be impounded. The aircraft will not be removed from the Hush House until the Hush House impoundment investigation has been released by 18 WG FOD Manager and/or 18 WG Safety. Documentation of Hush House impoundment and release will be annotated on the Hush House AFTO Form 244, **Industrial Support Equipment**, and the 18 WG Form 70, **Engine/Hush House/Test Cell Impounded**.

3.5.13. Coordinate transfer of the engine and all significant documentation to the 18 MXS Propulsion Flight engine IIO. Ensure the engine transfer is annotated on the 18 WG Form 70 and attached to the engine when transferred.

3.5.14. Ensure the aircraft IIOs supervisory forms review has been completed prior to the forms review by 18 OG/QA and 18 WG Safety.

3.5.15. Coordinate the completed supervisory inspection (CSI) with 18 OG/QA. Normally a period of at least 2 hours shall be allowed for forms review. More time will be required if extensive maintenance or down time is involved.

3.5.16. Brief all corrective actions to the SMO prior to attempting to release the aircraft from impoundment.

3.5.17. Contact the 18 OG Commander, Deputy Commander, or Deputy Commander for Maintenance to set up an appointment for release of impoundment and inform 18 OG/QA of the appointment time.

3.6. IIO, Impoundment Team Chief, and Flight Control Team Chief (if applicable) will be present during the review and release of the impoundment by the proper authority.

3.7. The 18 OG/QA will:

3.7.1. Contact the applicable squadron for an IIO.

3.7.2. Enter a red X in the red bordered AFTO Form 781A preprint "Aircraft impounded in accordance with 18 WGI 21-131 for (enter discrepancy)." The impoundment preprint will be numbered separately from the other AFTO Form 781As.

3.7.3. Contact 18 WG Safety to determine if a safety investigation is required. If required, coordinate with 18 WG Safety prior to releasing the aircraft.

3.7.4. Ensure the SMO assigns the IIO. No maintenance will be performed on the aircraft/equipment until an IIO is assigned and aircraft/equipment is released to that official by 18 OG/QA. At that point all actions will be coordinated and approved by the IIO until impoundment is released.

3.7.5. In conjunction with flight safety determine the need to submit any PQDRs.

3.7.6. Review the corrective actions and related maintenance documents on all impounded aircraft/equipment.

3.7.7. In conjunction with the IIO, coordinate with flight/ground safety as required.

3.7.8. Notify MOC when the aircraft is released from impoundment.

4. Impoundment Procedures for Engines/Equipment.

4.1. When a non-installed engine or equipment is impounded, it will be treated basically the same as an aircraft, except as follows:

4.1.1. The 18 MXS Propulsion Flight OIC/NCOIC will assign an IIO and notify 18 WG Safety and the 18 WG FOD Manager, if applicable.

4.1.2. The 18 LG QA will release the engine to the IIO.

4.1.3. In the event an engine is impounded while in the test cell, the affected test cell will be impounded and the engine will not be removed until the test cell impoundment investigation has been completed and signed off by 18 WG FOD Manager and/or 18 WG Safety. The test cell impoundment will be annotated on the test cell AFTO Form 244 and the 18 WG Form 70.

4.2. Engine/Equipment IIO will:

4.2.1. Ensure the engine/equipment is protected from unauthorized maintenance or cannibalization until authorized by 18 WG Safety or the 18 WG FOD Manager as applicable.

4.2.2. Ensure all maintenance documents are made available to 18 WG Safety upon request.

4.2.3. Place the 18 WG Form 70 with a red border into the in-shop engine work package. Equipment will also have a Red X entered into the AFTO Form 244.

4.2.4. Perform a CSI on engine/equipment following repairs.

4.2.5. Ensure the Engine Management Element records are updated and the Red X is cleared from the AFTO Form 244.

4.2.6. Coordinate with 18 MXS Maintenance and 18 WG Safety on engines/equipment impounded for reportable mishaps to determine if parts removed will be submitted for a PQDR.

4.2.7. Provide the 18 WG FOD Manager and 18 WG Safety with a report of damage including the dollar value of the blades/components to be replaced and the total man-hours expended on repairs (blending).

4.2.8. If the engine/equipment was impounded for a lost tool, ensure a PACAF Form 140A, **Consolidated Tool Kit Inventory Control and Inspection Log,** accompany the work package and records.

4.3. The 18 MXS IIO and impoundment team chief will be present during the 18 MXS supervision's review and release from impoundment.

5. Releasing Official.

5.1. The affected group commander, group deputy commander, or Deputy Commander for Maintenance is authorized to release aircraft/equipment impoundments.

5.2. During deployments, the senior-ranking maintenance or operations officers, designated in writing by the respective group commander, may release impoundments.

6. Form Prescribed. 18 WG Form 70, **Engine/Hush House/Test Cell/Equipment Impounded.**

JAMES B. SMITH, Brigadier General, USAF
Commander, 18th Wing